NOAA FISHERIES

Northern Pinniped Unusual Mortality Event (UME) Update
October 10, 2012

Were any ice seals observed in Alaska over the summer with UME symptoms?

No UME symptoms in ice seals were reported this summer. Two live bearded seals were captured (Barrow, Kotzebue) in July during NOAA Fisheries and North Slope Borough research activities. Both seals were healthy and displayed NO SIGN of the ulcerative dermatitis condition observed in association with the northern pinniped UME.

The 2012 fall seal harvest in the Arctic is underway and coastal community surveillance and reporting will be essential to understand the current UME status.

Were walruses observed in Alaska this summer with UME symptoms?

No UME symptoms in walruses have been reported this summer.

During late July, three orphaned male walrus calves were brought in from Barrow to the Alaska Sea Life Center (ASLC) for rehabilitation. All three calves had varying degrees of malnutrition and infection. Walrus #3 had increased liver enzymes and died 24 hours after it was admitted to ASLC. This walrus had multiple signs of infection throughout its organs. Analysis of this animal by histopathology has resulted in further work up at Columbia for testing. These results are pending. Neither of the two surviving animals has shown ulcerative dermatitis.

Were any marine mammals observed in the Bering Strait Region over the summer with UME symptoms?

Bering Strait / Bering Sea communities in Alaska reported ~ 50 UME affected ice seals (primarily bearded and ringed) from the subsistence harvest during April to June. Four ringed seal carcasses were provided to veterinarians and pathologists for further study. Since the spring subsistence seal harvest, no cases of affected seals have been reported.

Is Avian/Bird influenza a factor in the Alaska UME?

Bird flu, or avian influenza, is <u>not</u> a factor in the Alaska unusual mortality event (UME) Alaskan ice seals and Pacific walruses have tested negative for Avian/Bird influenza.

Recent reports that the UME in New England harbor seals was caused by the bird flu mutating and affecting harbor seals has caused increased concerns in Alaska's northern coastal communities. The NOAA-led team of marine mammal scientists and pathologists report that when sick seals first appeared last year, pathologists immediately tested for bird flu, since Alaska is a major flyway for birds, and therefore a possible location for introduction of bird flu. Additionally, microscopic findings in the lungs and skin of ringed seals and walruses from the Alaska UME are different from those of the New England harbor seal UME. The Alaska UME investigative team is collaborating with scientists across the country and world on such matters to ensure appropriate surveillance and early detection of sickness in marine mammals.

What activity is currently occurring in the investigation?

Marine Mammal Unusual Mortality Event Working Group
The Annual Meeting of the Working Group on Marine Mammal Unusual Mortality Events was held on August 15-17, 2012 in San Diego, CA. This meeting was an important opportunity to summarize data, provide an update on the investigation and analyses, as well as gather expertise about strategies for continuing to move forward with the investigation.

Beach Surveys
NSB beach surveillance surveys will continue in Barrow, Point hope, and Wainwright until beach travel is no longer possible due to freeze up. Preliminary findings over the last eight weeks include < 30 carcasses (walruses and adult seals) unrelated to the UME.

A collaborative effort between the Marine Advisory Program, Eskimo Walrus Commission, and the U.S. Coast Guard to survey the Bering Strait coast resulted in an aerial coastal carcass survey between Nome and Kotzebue on August 30th. Preliminary findings included only seven walrus carcasses (none fresh) and no ice seals.

What do we need to know next?

1) Whether there are any "new" cases: Harvest surveillance will continue this fall
2) Why no "new" cases during Spring 2012
3) Whether walruses / ice seals have the same illness
4) What do the comprehensive series of symptoms (and timeline of events) indicate as a potential cause?
5) Timeline for contaminant and radiation results
6) Prevalence estimates – the proportion of animals are infected
7) How samples from normal seals and walruses compare to those from diseased animals, particularly with respect to molting
8) What are the risk factors that may indicate the UME is nutritionally or environmentally driven